Mackil, Molly J. (DNREC)

From: Davis, Glenn F. (DNREC)
Sent: Monday, January 28, 2013 10:23 AM
To: Small, David (DNREC); Stiller, Kathleen M. (DNREC); Schepens, Dave J. (DNREC)
Subject: RE: Harim

Dave/Kathy

Dave Schepens & I sat down and discussed the information supplied by Harim, and would like to just mention the following:

The loading equation is expressed at MGD X concentration X 8.34 #/gal = lbs/day discharged

For Nitrogen at 5 mg/l the discharge would be 15MGD X 5.0 mg/l X 8.34 = 625.5 lbs/week X 52 weeks = 32,526 lbs./yr. N
For Phosphorus at 1 mg/l the discharge would be 15 MGD X 1.0 mg/l X 8.34 = 125.1 lbs./week X 52 weeks = 6,505 lbs./yr. P

That's still quite a bit of nutrient

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From: Small, David (DNREC)
Sent: Monday, January 28, 2013 9:48 AM
To: Stiller, Kathleen M. (DNREC); Davis, Glenn F. (DNREC); Schepens, Dave J. (DNREC)
Subject: Harim

Ed sent an email over the weekend – do you agree with the numbers?

Here are the basic calculations:

Allen/Harim is going to invest millions (they had budgeted $3 million and let's assume $10 million to meet the goal of 5 ppm N and 1 ppm P).

15,000,000 gallons of discharge/week equals 75 lbs. N/week (5 ppm x 15). 75 x 52 weeks = 3900lbs. N/year
15,000,000 gallons of discharge/week equals 15 lbs. P/week (1 ppm x 15). 15 x 52 weeks = 780lbs. P/year

This is their end goal for perhaps 3 or 4 years in. They will begin at 800,000 birds/week, which reduces these numbers by 75% for those first years. However, it seems to be in everyone's interest to work for permitting at their ultimate goal.

The Inland Bays cover an area of 35 square miles, or 22,400 acres. The discharge of 3900 lbs N/year results in 5.8 lbs. N/acre. The discharge of 780 lbs. of P/year results in 0.03 lbs./acre. Not very big numbers. Recognizing that most of the N and P may stay in the Indian River Bay, or roughly have of the total estuary, and the discharge per acre is doubled, it's still not a big number.

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